

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings includes changes to Figs. 9-11. These sheets which include Figs. 9-11, replace the original sheets including Figs. 9-11. In Figs. 9-11, the legend "Prior Art" has been added.

Attachments: Replacement Sheets (Figures 9-11; 2 sheets)

REMARKS

Claims 20-43 are pending in this application. Claims 20, 21, 25, 26, 32, 33, 37, 38, have been amended. Claim 27 has been canceled without prejudice or disclaimer. Claims 44-47 have been newly added. No new matter has been added.

Drawings

Figures 9-11 have been labeled "Prior Art" in order to overcome the drawing objection. Figures 12 and 13 have not been labeled as "Prior Art" because they are not par of the admitted prior art, but rather are necessary to explain the importance of the influence of the saturation region on the image of the vein pattern of the finger. Accordingly, Applicants request withdrawal of the requirement to label Figures 12 and 13 with the legend "Prior Art".

Claim Rejections under 35 U.S.C. §§102 and 103

Claims 20, 25, 27, 31, 32, 37, 39, and 43 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Application Publication 2002/0028004 by Miura et al; claims 21, 23, 26, 29, 33, 34, 38 and 40 under 35 U.S.C. § 103(a) are rejected as being unpatentable over Miura et al '004, in view of U.S. Patent Publication No. 2002/0048014, Kono et al; claims 22, 28, 36 and 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Miura et al '004, in view of U.S. Design Patent No. D382,862, Nakayama et al; and claims 24, 30, 35 and 41 under 35 U.S.C. § 103(a) are rejected as being unpatentable over Miura et al '004 in view of U.S. Patent No. 5,177,802, Fujimoto et al. Applicants request reconsideration of the rejections for the following reasons.

According to the present invention, a blood vessel pattern within a living body, and in particular, a blood vessel pattern of a finger is obtained by illuminating the subject region with two light sources (claims 20 and 32) from two sides of the finger (claims 20, 25, 32 and 37). A single image unit (claims 20 and 37) captures the light transmitted through the finger. To overcome a problem of regions of the image becoming saturated, which is recognized by Applicants as a problem with imaging blood vessel patterns of a finger, the sides of the finger are irradiated alternately with light. Specifically, saturated regions of the image can occur by the reflection of light on the side face of the finger, which causes parts of the blood vessel pattern to be lost, as shown in Figure 13, for example. *See also*, page 6, lines 12-16 of the specification. According to the present invention, it is possible to obtain an image of the finger that is free of the saturated regions by making the saturated regions of the side faces of the finger appear successively, i.e. by turning on the light sources disposed on both sides of the finger alternately. *See* page 22, lines 23, line 16 of the specification.

Miura is relied upon for disclosing an embodiment, shown in Figure 5 of the reference, in which a plurality of light sources and respective CCD cameras are coaxially aligned. *See*, paragraph [0033], lines 5-8 of the reference. The light sources in Miura, as pointed out in the Office Action, may be “operated with time lags for consecutive imaging”, however each of the plurality of CCD cameras receives light from a coaxially aligned light source 2. Accordingly, Miura does not disclose or suggest irradiating light to a finger from two sides of the finger using two light sources in combination with a single image capture unit that captures the light from the light sources transmitted through the finger, as claimed in claims 20 and 37. Further, as set forth in claim 20, the processing unit is claimed to cause the two light sources to irradiate

the light alternately, and cause the image capture unit to capture a plurality of images at a timing of the irradiation of the light sources. Further, with respect to claims 25 and 32, the image capture unit and the light source part of the claimed combination are set forth so as to not be opposite each other in coaxial form, which is required by the Figure 5 embodiment of Miura. Accordingly, independent claims 20, 25, 32 and 37, as well as dependent claims 27, 31, 39 and 43 are not anticipated by Miura under 35 U.S.C. §102(b).

The secondary references of Kono, Nakayama and Fujimoto are relied upon in rejecting dependent claims 21-24, 26, 28-30, 33-36, 38 and 40-43 however, none of these references overcomes the deficiencies in Miura. For example, Kono fails to teach alternately irradiating a finger from two sides of the finger and capturing an image with a single image capturing unit. Nakayama is relied upon for disclosing a conventional design for a finger-imaging apparatus, however the guide part for receiving the finger for causing the finger to arc along the length thereof is not shown by the reference. An example of such a guide part is shown in Figure 4 of the present application. Fujimoto is relied upon for disclosing a finger imaging system that captures images of finger, however, the reference does not teach alternately irradiating a finger from two sides of the finger. Therefore, the 35 U.S.C. §103(a) rejection of each of these dependent claims should be withdrawn, at least since each of these claims is patentable for being dependent from a base claim asserted to be patentable for the foregoing reasons.

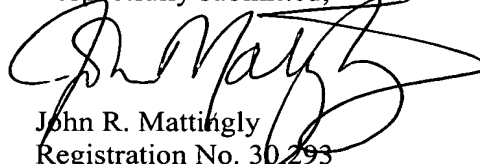
New Claims

Claims 44-47 have been added to set forth additional details of the subject matter that Applicants regard as the invention. The limitations set forth in these claims appear in earlier claims, and therefore each of the claims is clearly supported by the specification. Accordingly each of these claims should be allowed at least for depending from an allowable base claim and further for being patentable over the art of record.

CONCLUSION

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



John R. Mattingly
Registration No. 30,293
Attorney for Applicant(s)

Mattingly, Stanger, Malur & Brundidge, P.C.
1800 Diagonal Road, Suite 370
Alexandria, Virginia 22314
(703) 684-1120
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